

## X15642.ST25.txt SEQUENCE LISTING

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      Eli Lilly and Company
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X15642.ST25.txt
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Gln Ala Xaa Lys Xaa Phe Ile Xaa Trp Leu Xaa Lys Gly Arg Xaa
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Gln Ala Xaa Lys Glu Phe Ile Ala Trp Leu Xaa Lys Gly Arg Xaa
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x15642.ST25.txt
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X15642.ST25.txt
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penicillamine, or
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Xaa = Ser, His, Pro, Lys, Arg, L-Cys, D-Cys, homocysteine,
penicillamine, or
Xaa = His, Ser, Arg, Lys, L-Cys, D-Cys, homocysteine,
penicillamine, or
Xaa = His, Ser, Arg, Lys, L-Cys, D-Cys, homocysteine,
penicillamine, or
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(37)..(37)

MISC\_FEATURE

(38)..(38)

MOD\_RES

MOD\_RES

(39)..(39)

MISC\_FEATURE

(40)..(40)

MOD\_RES

(40)..(40) Amidation

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2-amino-histidine, beta-hydroxy-
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        Xaa = Val, Trp, Ile, Leu, Phe, or Tyr
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or is absent
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NH2, or is absent
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        (36)...(36)
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       Xaa = Pro, Ala, Arg, Lys, His, L-Cys, D-Cys, homocysteine, penicillamine, NH2
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or is absent
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       Xaa = Ser, His, Pro, Lys, Arg, L-Cys, D-Cys, homocysteine,
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or is absent
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       Xaa = His, Ser, Arg, Lys, L-Cys, D-Cys, homocysteine,
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is absent
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Gln Ala Xaa Lys Glu Phe Ile Ala Trp Leu Xaa Xaa Gly Xaa Xaa Xaa
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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        (40)..(40)
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       Xaa = His, Ser, Arg, Lys, L-Cys, D-Cys, homocysteine,
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# x15642.ST25.txt penicillamine, NH2, or is absent

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       Xaa = His, Ser, Arg, Lys, L-Cys, D-Cys, homocysteine, penicillamine, NH2, or is absent
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Gln Ala Xaa Lys Glu Phe Ile Ala Trp Leu Xaa Lys Gly Gly Pro Xaa
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       Xaa = L-histidine, D-histidine, desamino-histidine,
2-amino-histidine, beta-hydroxy-histidine, homohistidine,
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       Xaa = Phe, Trp, or Tyr
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       Xaa = Val, Trp, Ile, Leu, Phe, or Tyr
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       Xaa = Ser, Trp, Tyr, Phe, Lys, Ile, Leu, Val
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       (35), (35)
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       or is absent
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       (37)..(37)
       Xaa = Pro, Ala, L-Cys, D-Cys, homocysteine, penicillamine, NH2 or
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       is absent
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x15642.ST25.txt
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x15642.ST25.txt
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Xaa = Lys, NH2, or is absent

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<223>
       Xaa = Pro, Ala, Arg, Lys, His, NH2 or is absent
<220>
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<222>
       (39)..(39)
<223> Xaa = Ser, His, Pro, Lys, Arg, NH2 or is absent
<220>
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<221>
       (40)..(40)
Xaa = His, Ser, Arg, Lys, NH2 or is absent
<222>
<223>
<220>
<221>
<222>
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       (41)..(41)
<223>
       Xaa = His, Ser, Arg, Lys, NH2 or is absent
<220>
<221> MISC_FEATURE
<222>
       (42)..(42)
       Xaa = Lys, NH2, or is absent
<220>
<221>
       MISC_FEATURE
<222>
       (43)..(43)
<223>
       Xaa = Pro, His, Lys, NH2 or is absent
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       (44)..(44)
<223> Xaa = Ser, His, Lys, NH2 or is absent
<220>
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<222>
      (45)..(45)
<223>
       Xaa = Lys, NH2 or is absent
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<400> 14
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His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly 1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Gly Pro Xaa 20 25 30

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<210> 15
<211> 31
<212> PRT
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<213> Artificial

<220> <223> Synthetic construct

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<220>
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```

histidine, homohistidine, alpha-fluoromethyl-histidine, or alpha-methyl-histidine

```
<220>
<221>
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<222>
        (2)..(2)
<223>
       Xaa = Ala, Gly, Val, Leu, Ile, Ser orThr
<220>
<221>
<222>
       MISC_FEATURE
        (6)..(6)
<223>
       Xaa = Phe, Trp, Tyr
<220>
<221>
<222>
       MISC_FEATURE
```

<222> (10)..(10) <223> Xaa = Val, Trp, Ile, Leu, Phe, or Tyr

<220> <221> MISC\_FEATURE <222> (12)..(12)

<223> Xaa = Ser, Trp, Tyr, Phe, Lys, Ile, Leu, Val

<220>
<221> MISC\_FEATURE
<222> (13)..(13)
<223> Xaa = Tyr, Trp, or Phe
<220>
<221> MISC\_FEATURE

<222> (14)..(14) <223> Xaa = Leu, Phe, Tyr, or Trp

<220> <221> MISC\_FEATURE

```
X15642.ST25.txt
<222>
        (16)..(16)
<223>
       Xaa = Gly, Glu, Asp, Lys
<220>
<221>
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<222>
        (19)..(19)
<223>
       Xaa = Ala, Val, Ile, or Leu
<220>
<221>
       MISC_FEATURE
<222>
        (21)..(21)
<223>
       Xaa = Glu, Ile, or Ala
<220>
       MISC_FEATURE
<221>
        (24)..(24)
<222>
       Xaa = Ala \text{ or } Glu
<223>
<220>
       MISC_FEATURE
<221>
       (27)..(27)
Xaa = Val or Ile
<222>
<223>
<220>
<221>
       MISC_FEATURE
<222>
        (31)..(31)
<223>
       Xaa = Gly, His, Lys, or NH2 or is absent
<400>
Xaa Xaa Glu Gly Thr Xaa Thr Ser Asp Xaa Ser Xaa Xaa Xaa Glu Xaa
1 10 15
                                        10
Gln Ala Xaa Lys Xaa Phe Ile Xaa Trp Leu Xaa Lys Gly Arg Xaa 20 25 30
<210>
       16
<211>
       31
<212>
       PRT
       Artificial
<213>
<220>
       Synthetic construct
<223>
<400>
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly 20 25 30
<210>
       17
<211>
       39
<212>
       PRT
<213>
       Artificial
<220>
<223>
       Synthetic construct
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<400> 17

His Val Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu
1 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Ile Lys Gly Gly Pro Ser

Ser Gly Ala Pro Pro Pro Cys 35

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Artificial <213>

<220>

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<221> <222> MOD\_RES

(39)..(39)

<223> 2,2'-dithiolbis(5-dinitropyridine) is attached to the thiol of Cys at position 39

<400> 18

His Val Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Ile Lys Gly Gly Pro Ser 20 25 30

Ser Gly Ala Pro Pro Pro Cys 35

<210>

<211> 32

<212> PRT

Artificial <213>

<220>

<223> Synthetic construct

<400>

His Val Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Ile Lys Gly Arg Gly Cys 25 30

<210> <211>

20 32

<212> PRT

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<213>
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<220>
<223>
       Synthetic construct
<220>
<221>
<222>
       MOD_RES
       (32)..(32)
<223>
       S-sulfonate (SSO3) is attached to the thiol of Cys at position 32
<400>
       20
His Val Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Ile Lys Gly Arg Gly Cys
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       32
<211>
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       PRT
       Artificial
<213>
<220>
<223>
       Synthetic construct
<400>
       21
His Val Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Ile Lys Gly Arg Gly Lys
<210>
       22
32
<211>
<212>
       PRT
       Artificial
<213>
<220>
<223>
       Synthetic construct
<220>
<221>
       MOD_RES
<222>
       (32)..(32)
<223>
       [3-(2-pyridyldithio)propanamide]amide is attached to Lys at
       position 32
<400>
       22
His Val Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Glu
```

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Ile Lys Gly Arg Gly Lys

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<210>
         23
         39
<211>
<212>
         PRT
<213>
         Heloderma suspectum
<220>
         MISC_FEATURE (1)..(39)
<221>
<222>
<223>
         Exendin-3
<400>
         23
His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu 1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35
<210>
         39
<211>
<212>
         PRT
<213> Heloderma suspectum
<220>
<221>
<222>
         MISC_FEATURE (1)..(39) Exendin-4
<223>
<400>
         24
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser 20 25 30

Ser Gly Ala Pro Pro Pro Ser